

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

NOVA SPIVACK

APPLICATION No.: 10/720,031

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FOR: **METHODS AND SYSTEMS FOR
CREATING A SEMANTIC OBJECT (AS
AMENDED)**

EXAMINER: JEAN B. FLEURANTIN

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**AMENDMENT AND RESPONSE TO FINAL OFFICE ACTION SUBMITTED WITH
THE FILING OF AN RCE**

MAIL STOP: RCE

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

This paper is submitted in response to the Final Office Action dated January 25, 2008 and filed with a Request for Continued Examination (RCE).

Amendments to the Claims begin on page **2** of this paper.

Remarks begin on page **11** of this paper.

Amendments to the Claims

This listing of the claims will replace all prior versions, and listings, of claims in the application.

1. (Canceled)
2. (Currently Amended) A method, comprising:
 - receiving an indicator to create a semantic object to represent a target referent;
 - determining whether an object type of the target referent is a physical entity, a digital object, or an intangible entity;
 - identifying a semantic object type for the semantic object suitable to represent the object type of the target referent;
 - creating the semantic object of the semantic object type to represent the target referent, the semantic object having a plurality of meta-tags;
 - wherein the plurality of meta-tags comprises a predetermined set of meta-tags based on the semantic object type; ~~and~~
 - wherein a meta-tag of the plurality of meta-tags is associable with metadata; and
 - associating the meta-tag of the plurality of meta-tags with metadata; wherein at least one of, the meta-tag and the metadata is definable by an ontology.
3. (Previously Presented) The method of claim 2, further comprising assigning one of multiple lifecycle stages to the semantic object.
4. (Previously Presented) The method of claim 3, wherein the multiple lifecycle stages include at least one of: a draft stage, an active stage, an inactive stage and a deleted stage, further comprising subsequently transitioning the semantic object from one of the multiple lifecycle stages to another.
- 5-10. (Cancelled)

11. (Previously Presented) The method of claim 2, further comprising exchanging information about the ontology using the semantic object.
12. (Previously Presented) The method of claim 2, further comprising extracting at least part of the content from the target referent before inclusion in the semantic object.
13. (Previously Presented) The method of claim 12, further comprising subsequently determining that the referent target has been revised and updating metadata associated with one or more of the plurality of meta-tags of the semantic object using the revision.
14. (Previously Presented) The method of claim 12, wherein the extraction is part of a data mining performed on selected resources.
15. (Previously Presented) The method of claim 2, further comprising sharing the semantic object with a user and updating metadata associated with one or more of the plurality of meta-tags of the semantic object to reflect a change made by the user.
16. (Cancelled)
17. (Previously Presented) The method of claim 15, wherein at least one of the creation of the semantic object and modification of the semantic object is triggered by one or more of the following events comprising:
 - saving a document or data item;
 - creating a document or data item
 - opening or viewing a document or data item;
 - modifying a document or data item;
 - transmitting a document or data item;
 - receiving a document or data item;
 - deleting a document or data item; and

integrating documents or data items with existing file servers, databases or search engines.

18. (Cancelled)

19. (Currently Amended) The method of claim 2, further comprising:
maintaining a table of mappings between a plurality of semantic objects and the respective target referents; and
further providing a daemon that watches for changes and updates the association table accordingly.

20-21. (Cancelled)

22. (Previously Presented) The method of claim 2, further comprising embedding the semantic object in the referent target.

23. (Currently Amended) The method of claim 2, further comprising creating a link between the semantic object and any of the at least one of the plurality of semantic objects, the created link having a type specified by a rule.

24. (Previously Presented) The method of claim 2, further comprising:
receiving a query created by a user;
creating a view that stores the received query;
creating a view semantic object that represents the view; and
sharing the created new view semantic object with at least another user in the computer system.

25. (Previously Presented) The method of claim 2, wherein the semantic object is created in a process of matching offers and requests, the offers represented by offer objects and the requests

represented by request objects, and wherein the offer objects and the request objects are semantic objects that each include (i) metadata defining particulars of the offers and the requests, and (ii) payload data.

26. (Currently Amended) The method of claim 25, wherein metadata is maintained using an approach selected from:

- storing offer or request metadata in meta-tags in the semantic object;
- creating a separate semantic object and storing the offer or request metadata in the separate semantic object, and wrapping the semantic object using the separate semantic object;
- and
- creating a separate semantic object and storing the offer or request metadata in the separate semantic object, and creating a reference pointer between the created semantic object and the separate semantic object.

27. (Previously Presented) The method of claim 25, further comprising:

- test posting the semantic object to provide an estimate of a number of matches; and
- providing for revision of the semantic object based on the test posting.

28. (Previously Presented) The method of claim 27, wherein a particular user provides example semantic objects that are test posted and evaluated, further comprising generating an optimized semantic card specification based on the test posting.

29. (Previously Presented) The method of claim 2, wherein the target referent is one or more of a physical entity, a software entity, and an intangible entity.

30. (Previously Presented) The method of claim 2, wherein receiving the indicator to create the semantic object comprises, one or more of:

- receiving a user request;
- receiving an event-based trigger; and

receiving an automatic trigger.

31. (Previously Presented) The method of claim 30, further comprising, receiving the event-based trigger automatically generated when an event is detected from one or more of a file directory and an application.

32. (Previously Presented) The method of claim 30, further comprising, generating the automatic trigger responsive to data-mining a knowledge resource.

33. (Previously Presented) The method of claim 2, wherein, the plurality of meta-tags further comprises, a customized set of meta-tags; wherein the customized set of meta-tags are user-definable.

34. (Previously Presented) The method of claim 2, wherein the metadata of the meta-tag is one or more of, user-specifiable and machine-specifiable.

35. (Previously Presented) The method of claim 34, further comprising, automatically identifying metadata of the target referent to be associated with the metadata of the meta-tag of the semantic object representing the target referent.

36. (Previously Presented) The method of claim 2, further comprising, associating the semantic object with a set of rules; wherein the set of rules are one or more of, user-specifiable and machine-specifiable.

37. (Previously Presented) The method of claim 36, wherein the set of rules associated with the semantic object comprises one or more of, a set of access privilege rules, a set of modification rules, a set of linking rules, and a set of update rules of the semantic object.

38. (Currently Amended) A method of creating a semantic object of a linking type for linking related semantic objects that represent related referents, the method comprising:

receiving an indicator to create a linking semantic object between a source semantic object representing a source referent and a target semantic object representing a target referent;

identifying a set of linking rules associated with the target semantic object, the set of linking rules governing a set of circumstances under which the target semantic object is to be linked to one or more other related semantic objects; and

creating the linking semantic object indicating a relationship between the source referent represented by the source semantic object and the target referent represented by the target semantic object responsive when in compliance with the set of linking rules associated with the target semantic object.

39. (Previously Presented) The method of claim 38, wherein receiving the indicator to create the linking semantic object comprises:

identifying a relationship between metadata of the source semantic object and metadata of the target semantic metadata; and

generating the indicator to create linking semantic object between the source semantic object and the target semantic object.

40. (Currently Amended) The method of claim 38, wherein receiving the indicator to create the linking semantic object comprises receiving a user request to create the linking semantic object for indicating a relationship between the source referent represented by the source semantic object and the target referent represented by the target semantic object.

41. (Previously Presented) The method of claim 39, further comprising, assigning a confidence value to the linking semantic object to represent an indication of accuracy of the linking semantic object.

42. (Currently Amended) The method of claim 38, further comprising, associating the linking semantic object with the metadata of the source semantic object.

43. (Withdrawn) A method, comprising:

receiving a user request to create a semantic object of a first type to represent an offering;
providing the user with a template associated with the semantic object of the first type;
wherein one or more entries of the template are submitted by the user to indicate a first set of criteria for identifying a first suitable set of recipients;

creating the semantic object of the semantic object type to represent the offering, the semantic object having a plurality of meta-tags associated with the one or more entries of the template;

wherein the plurality of meta-tags comprises a predetermined set of meta-tags based on the semantic object type;

optionally linking the semantic object to one or more of other semantic objects; wherein the linking is one or more of user-specifiable based on a second set of criteria and machine-specifiable based on semantic matching;

identify the suitable set of recipients based on the first set of criteria;
identifying a second suitable set of recipients based on semantic matching; and
sending the offering represented by the semantic object to the first and second suitable set of recipients over a network.

44. (Withdrawn) The method of claim 43, wherein the first set of criteria comprises, a set of explicitly named recipients.

45. (Withdrawn) The method of claim 44, wherein the first set of criteria comprises, a set of implicit criteria.

46. (Withdrawn) A system, comprising:

a plurality of user devices communicatively coupled to a host server over a network connection;

a first user device of a plurality of user devices to receive a user request to create a semantic object of a first type to represent an offering, when in operation, the first user device establishes a communication session with the host server to transmit the user request;

wherein, when in operation, the host server provides the user with a template associated with the semantic object of the first type; wherein one or more entries of the template are submitted by the user via the first user device to indicate a first set of criteria for identifying a first suitable set of recipients;

wherein, when in operation, the host server creates the semantic object of the semantic object type to represent the offering, the semantic object having a plurality of meta-tags associated with the one or more entries of the template and the plurality of meta-tags comprises a predetermined set of meta-tags based on the semantic object type;

wherein, when in operation, the host server optionally links the semantic object to one or more of other semantic objects; wherein the linking is one or more of user-specifiable based on a second set of criteria and machine-specifiable based on semantic matching;

wherein, when in operation, the host server identifies the suitable set of recipients based on the first set of criteria and a second suitable set of recipients based on semantic matching; and

a second set of user devices of the plurality of user devices, when in operation, establishes a communication session with the host server over the network connection to receive the offering represented by the semantic object to be presented to the first and second suitable set of recipients.

47. (Withdrawn) A system, comprising:

means for, receiving a user request to create a semantic object of a first type to represent an offering;

means for, providing the user with a template associated with the semantic object of the first type; wherein one or more entries of the template are submitted by the user to indicate a set of criteria for identifying a first suitable set of recipients;

means for, creating the semantic object of the semantic object type to represent the offering, the semantic object having a plurality of meta-tags associated with the one or more entries of the template;

wherein the plurality of meta-tags comprises a predetermined set of meta-tags based on the semantic object type;

means for, optionally linking the semantic object to one or more of other semantic objects; wherein the linking is one or more of user-specifiable based on a second set of criteria and machine-specifiable based on semantic matching;

means for, identify the suitable set of recipients based on the set of criteria;

means for, identifying a second suitable set of recipients based on semantic matching; and
means for, sending the offering represented by the semantic object to the first and second suitable set of recipients over a network..

REMARKS

This response is being filed with an RCE.

Claims 2-4, 11-15, 17, 19 and 22-47 are pending in this application. Claims 2-4, 11-15, 17, 19, and 22-42 have been rejected. Claims 43-47 are subject to restriction and/or election requirement and have been withdrawn from consideration in the pending matter. Claims 5-10, 16, 18, 20-21 have been previously cancelled. The response amends claims 2, 23, 38, 40, and 42.

Reconsideration and withdrawal of the rejections set forth in the Final Office Action dated January 25, 2008 are respectfully requested. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. No new matter has been added.

In-person Interview Summary Statement

An in-person interview was conducted between Examiner Fleurantin, and applicant's representatives, Brian Coleman and Yenyun Fu. The undersigned representative wishes to thank the Examiner for the in-person interview conducted on April 8, 2008. During the interview, proposed claim amendments to independent claim 1 were briefly discussed (and such amendment is reflected in the section "Amendments to the Claims" listed above). Examiner Fleurantin recommended filing the proposed amendments with an RCE and continuing the communication after the response to the Final Office Action dated January 25, 2008 has been submitted.

Applicant herein submits the proposed amendments and is filing an RCE herewith to facilitate further discussion with the Examiner regarding the pending matter. Applicant thanks the Examiner for considering and entering the amendments after-final.

No particular agreement was reached during this interview.

35 U.S.C. §101 Rejections**Claims 38-42**

The Examiner has rejected claims 38-42 under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter. Applicant respectfully disagrees. However, claims 38, 40, and 42 have been amended to expedite prosecution.

Independent claim 38 is directed to a method of “creating a semantic object of a linking type for linking related semantic objects that represent related referents” (Claim 38, Preamble). Applicant submits that the subject matter of claim 38 indeed has practical application and that the produced result is both useful and tangible.

Further examples of practical applications include the teachings of pending dependent claims 39-42 of independent claim 38. Claims 39-42 provide substantive demonstration of the context, substance, and/or practical applications of “semantic object of a linking type” and the manipulations thereof. Applicant therefore asserts that concrete ideas regarding “semantic objects of a linking type” are disclosed with reference to claimed subject matter in claims 39-42 and with further reference to the extensive specification of this application describing several practical applications including at least the description in paragraphs [0313]-[0332].

Thus, the withdrawal of the rejection of the claims 38-42 under 35 U.S.C. §101 is respectfully requested.

35 U.S.C. §103 Rejections**Claims 2-4, 11-15, 17, 19, 22-42**

Claims 2-4, 11-15, 17, 19, 22-42 are rejected under 35 USC §103(a) as being allegedly unpatentable over Gupta, et al. (US Patent No. 6,513,059.) in view of Kroenke, et al. (U.S. Patent No. 5,809,297). Applicant respectfully disagrees.

The cited references do not show each and every element as recited in the independent claim 2

Applicant respectfully submits that when viewed as a whole or individually, the cited references do not show the subject matter recited in the pending claims.

“To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).”

Applicant's independent claims 2 and 38 include claimed subject matter neither taught nor suggested by Gupta and Kroenke when viewed alone or in combination. Therefore, Applicant's independent claims are patentable over the references.

For example, the method in claim 2 includes:

receiving an indicator to create a semantic object to represent a target referent;

determining whether an object type of the target referent is a physical entity, a digital object, or an intangible entity;

identifying a semantic object type for the semantic object suitable to represent the object type of the target referent;

creating the semantic object of the semantic object type ..., ...; wherein the plurality of meta-tags comprises a predetermined set of meta-tags ...; and

associating the meta-tag of the plurality of meta-tags with metadata; ... definable by an ontology. (*Emphasis Added*, Claim 2)

Reference 'Gupta'

Gupta discusses a system and method for facilitating exchange of information on a computer network. The system of Gupta provides one or more context trees, with each tree including two or more connected nodes, each node being associated with one or more selected node objects (Abstract, Gupta).

The combination of nodes in Gupta form a context tree where concepts evolve from a root node toward its node members, where each node member further specializes the concept.

For example, in Gupta:

"When viewed as a hierarchical structure, in a context tree, concepts evolve from a root node towards its member, where each member further specializes the concept. Hence, in Awit spaces, each individual context tree has a local knowledge base" (Gupta Col. 14, lines 15-20)

Therefore, the nodes of Gupta are limited to representation of node objects that are 'concepts' per se. Consequently, Gupta's nodes do not have varying 'types' suitable to represent target referents of varying 'types'.

Applicant's claim 2 recites "determining an object type of the target referent (which can be a physical entity, a digital object, or an intangible entity (e.g., concept))" and identifying suitable "semantic object type" for representation of the target referent. Gupta has no need for this since each context tree represents a particular specialized concept where each node forms a hierarchical structure that represents the hierarchy between related concepts.

Similar rationale and arguments can be applied to independent claim 29. However, the Examiner neglected to provide detailed analysis of the basis of rejection of claim 29 in view of Gupta and Kroenke. The Examiner applied the same line of reasoning of claim 2 to claim 29 even though the subject matter in claim 29 is different from that of claim 2.

Further, Gupta does not disclose creating a semantic object. The Examiner acknowledges this. The Examiner states that "Gupta fails to explicitly disclose creating the semantic object of the semantic object type to represent the target referent." (Page 7 of Office Action mailed January 25, 2008).

Reference 'Kroenke'

Kroenke does not disclose or suggest the features/functionalities that (as discussed above) are missing from Gupta. In particular, Kroenke also does not teach or suggest the above-emphasized claimed subject matter which has been newly added to claim 2.

Applicant further submits that Kroenke does not disclose, suggest, or motivate meta-tags and metadata associated with the semantic object, "wherein at least one of, the meta-tag of the plurality of meta-tags and the metadata associated with the meta-tag is definable in an ontology", as claimed by applicant in independent claim 2.

Therefore, without admitting to the propriety of the combination as suggested by the Examiner, even if Gupta and Kroenke were combined, the resulting disclosure would be different from the subject matter disclosed by the applicant in independent claim 2, at least for the above stated reasons. Thus, applicant submits that independent claim 2 is patentable over Gupta, Kroenke, and over the combination of Gupta and Kroenke.

Dependent Claims

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, applicant's silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim. Therefore, the remaining dependent claims are also patentable over the cited references. The withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested for claims 2-4, 11-15, 17, 19, 22-37 and 39-42.

CONCLUSION

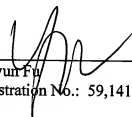
In light of the amendments and the preceding arguments, the applicant respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance.

If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is cordially invited to telephone the undersigned counsel at (650) 838-4306 to arrange for such a conference.

No fees are believed to be due, however, the Commissioner is authorized to charge any underpayment in fees to Deposit Account No. 50-2207.

Respectfully submitted,

Date: April 10, 2008



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